

# Reconsidering Wildland Fire Use: Perspectives from the Northern Rockies

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**Abstract**—The idea that more wildfires should be allowed to burn for resource benefit is widespread in federal fire management in the United States and the research community is heavily invested in strategies, tools, data, and information to provide decision-making support for these fires. In the context of the very large wildfires that are now occurring with frequency, it is generally believed that previous fires will confer benefit when large fires threaten. This paper examines whether federal fire management policies and practices in the United States are evolving to support more extensive use of fire. It argues that 2009 fire policy guidance, intended to increase decision flexibility by addressing all management options for every fire, may be inadvertently discouraging managers from preparing adequately for resource benefit fires. A consequence is the stagnation in strategic use of wildfire to improve forest health, treat fuels, and reduce costs, accompanied by deterioration in experience, energy, and enthusiasm for use of fire for resource benefit. Decades of Wildland Fire Use show that without extensive planning, managing wildfire for resource benefit will rarely be selected as the first option. Even when resource benefit fire is promoted in Fire Management Plans, it is seldom considered seriously beyond the few areas where it has significant historical legacy. Further, existing decision support systems are rarely invoked to support the first and most important decision on new starts. Instead, initial decisions are made quickly, often under duress, by the few individuals present when a fire is detected, which often favors aggressive initial attack. The energy and sense of purpose of the Wildland Fire Use community of a decade ago provided powerful motivation for change as well as vectors for distribution of new ideas and approaches. That community has largely dissolved, the influence of the Wildland Fire Implementation Plan (WFIP) has been removed, and it is uncertain whether new policies and practices are advancing resource benefit fire as intended. It is worth considering whether fire management removed the distinction between Fire Use and Suppression too soon and made it too easy to select the status quo.

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## Introduction

This paper considers the status of fire for resource benefit, formerly known as Wildland Fire Use (WFU), in the context of changes in policy and practice that have occurred in the past decade. It contends that the blurring of lines between fire for resource benefit and suppression that occurred following the 2009 policy revision (USDA and USDI, 2009) is resulting in unanticipated consequences for the long-term use of fire for resource benefit. I intend to provoke reflection on the health and welfare of wildland fire use and to initiate thought on how to invigorate it. The terms ‘fire use’ and ‘fire for resource benefit’ are used interchangeably, recognizing that ‘fire use’ is antiquated by recent policy. The current ambiguity in how to describe fire use is a symptom and issue central to the future of resource benefit fire that will be addressed later in this document. The paper is organized in four sections: (1) a review of fire for resource benefit in policy and practice; (2) a discussion of the implications of recent changes in policy for the use of fire for resource benefit; (3) a look back at WFU from a

decade ago highlighting the factors that made it successful, exciting and important; and (4) some suggestions to invigorate use of fire for resource benefit. The paper is predicated on the assumption that current levels of fire use are inadequate to meet ecosystem needs and significant growth in WFU is desirable. The advantages of natural fire have been expounded upon extensively in the scientific literature from perspectives of ecology (e.g., McKenzie and others 2011), economics (e.g., Houtman and others 2013), and risk (e.g., Finney and others 2007; Parks and others 2014). The barriers to implementation of fire use have also been documented (e.g., Doane and others 2006).

## Fire for Resource Benefit in Policy and Practice

Federal policy has promoted fire as an essential natural process since 1968 when the National Park Service changed its policy to allow some wildfires to burn in order to meet ecological objectives. The Forest Service followed suit in 1974 after two years of experimentation with natural fires in the White Cap Fire Management Area of Idaho (van Wagtendonk, 2007). Although the premise of fire for resource benefit has been revisited many times following high profile events such as the Yellowstone Fires, WY (1988),

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the South Canyon Fire, CO (1994) and the Cerro Grande Fire, NM (2000), it has been reaffirmed each time (USDA and USDI, 1989; 1995; USDA and others 2000). The Federal Wildland Fire Management Policy and Program Review (1995) which occurred as a direct result of fourteen firefighter fatalities on the South Canyon Fire near Glenwood Springs, CO directed that “fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries.” This document energized use of fire for resource benefit on federal lands and its ecosystem-centric approach to fire has been consistently and repeatedly reaffirmed through many subsequent national policy reviews, plans, and strategies (USDA and USDI, 2000; 2001; 2003, 2009; 2014; USDA and others 2005; 2009). In sum, federal fire policy and direction has clearly promoted fire as an essential natural process for nearly five decades, and it continues to do so in new guidance documents such as the National Cohesive Wildland Fire Management Strategy (2014).

Implementing policy to support ecological fire has largely occurred through application of Wildland Fire Use (formerly Prescribed Natural Fire -PNF) and prescribed fire. PNF programs emerged in the National Park Service (NPS) and United States Forest Service (USFS) in the late 1960s and early 1970s to allow a few lightning-caused fires to burn in remote areas (Parsons and others 1986). These programs grew slowly but steadily, eventually giving way to Wildland Fire Use (WFU) in 1998 (although the term wasn’t sanctioned officially until 2003). Prominent programs developed in the expansive wilderness of the Selway and Gila and in Sequoia-Kings Canyon and Yosemite National Parks, among others (Parson and Landres, 1998). Fire Use acres continued to grow, punctuated by episodic declines following controversial fires and political events. By 2006, there were nine Wildland Fire Use Teams and at least 30 Fire Use Modules dedicated to WFU. The Wildland Fire Use Implementation Procedures Reference Guide (2005) directed managers to justify suppression actions in writing when WFU was not selected in areas where it had been approved. Although small in impact compared with total acres burned, the practice of allowing fire to burn for resource benefit seemed to be entering the mainstream consciousness of all levels of federal fire management.

Largely as a result of WFU, many federal fire managers and scientists now recognize the role of fire as a critical ecological process and are invested in strategies, tools, data, and information to encourage decision-making to support these fires. However, considering that fire use has accounted for only 2-4 percent of total annual acres burned in the period 2000-2013 (USDA Forest Service, 2014), its status as a viable management alternative is fragile, particularly in the face of changing land use patterns, societal expectations, economics, and climate change and variability. Although the belief systems of many federal fire managers and scientists favor fire for resource benefit, barriers to implementation remain significant and are often related to “the circumstances under which a fire occurs, and the

likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected” (USDA and USDI, 1995). The resource protection focus of many state-level land management agencies is largely incompatible with fire use, and the public and politicians remain largely unconvinced of its benefits. Even within the federal fire management community itself, there is considerable disagreement about the feasibility of the practice despite policy encouraging more WFU. Responses of fire managers to the 2012 letter from USFS Deputy Chief James Hubbard (USDA Forest Service, 2012) requesting aggressive initial attack to reduce suppression costs showed how easily managers revert to suppression-oriented behaviors even in the vast areas of large wildernesses. In that year, fire use accomplishments in terms of acres burned dipped sharply to their lowest point since 2005 (USDA Forest Service, 2014).

## Implications of Changes in Policy Guidance

In February 2009, federal agencies received new policy guidance (USDA and USDI, 2009) regarding wildfire following two years of trial-and-error under Appropriate Management Response doctrine (USDA Forest Service, 2007). The new guidance provided for two types of fire – unplanned wildfire and planned prescribed fire. Federal agencies could now manage wildfires for many objectives concurrently and change those objectives as fire moved across the landscape. This differed from previous guidance which distinguished sharply between wildland fire use and everything else and required fire managers to classify each fire as fire use (‘good’ fire) or suppression (‘bad’ fire) and to use different decision processes for each.

The new guidance was welcomed by fire managers wanting to use fire for resource benefit because if resource benefit was identified as an objective in the land resource management plan (LRMP), managers gained unprecedented flexibility in decision-making to support fire use. Whereas previously only acres burned in fire use counted toward resource benefit, fire use acres now could accrue to any naturally ignited wildfire when they were moved toward desired future conditions specified in LRMPs regardless of goals and objectives of individual fires. Further, the decision document, support system, and risk assessment tools became the same for every fire regardless of objectives.

An expectation of the new guidance was that there would be more resource benefit accomplishments because fire managers could modify suppression tactics on any fire when risks were low to encourage ecological outcomes. Data from the USFS show that fire use acres on Forest Service jurisdictions have indeed trended upward since 2009, averaging 296,000 per year compared with 166,000 per year from 2001-2008 (USDA Forest Service, 2014). Although fire use acres remain a small fraction of total acres burned, the percentage of USFS fire use acres to total

burned acres roughly doubled from 2.3 percent in 2001-2008 to 4.6 percent in 2009-2013.

Interpreting this trend is difficult, however, because it is not possible to know whether the observed increase is a result of fire use or due to changes in accounting practices in which more acres that would have burned anyway are now available for classification as fire use. If the uptick in fire use acres is primarily a product of failed suppression efforts, then WFU is becoming an incidental outcome rather than a management strategy. This would not be an entirely negative outcome if fire managers were encouraging fire use by not actively suppressing all parts of existing fires where previously they might have, but it is a poor substitute for allowing fires to burn by intention. In the long term, the practice of using fire for resource benefit by accident would exacerbate a problem identified recently by fire scientist Mark Finney who noted in *The New York Times* that “by suppressing fires in all the conditions we can, we’re saving the landscape for the worst conditions. We won’t say that’s our policy, but by our actions, we are selecting for only the most extreme fires. We need to choose good fire over bad fire.” (Tullis, 2013).

Prior to 2009, WFU was clearly concerned with selecting naturally occurring fires that would *not be* initial-attacked and allowing those fires to burn within certain environmental and geographic constraints to achieve resource benefits (e.g., modified suppression). Today, fire use also includes acres that meet ecological objectives specified in LRMPs on any naturally occurring unplanned ignition regardless of manager’s intent. While the former practice still occurs in large wildernesses and national parks where viable fire use programs emerged in the 1970s and 1980s, it is not easy to distinguish from the practice of attempting to suppress fires while counting their acres as resource benefit or providing initial attack on only parts of fires. Without distinction between intentional WFU and serendipitous benefit acres, it cannot be known if fire management is fulfilling its policy goal of allowing wildland fire “to be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role” (USDA and USDI, 1995), nor can trends in fire use practices be interpreted correctly.

The implications of dissolving the WFU program into fire management at large extend beyond shortcomings in monitoring accomplishments and trends. Without identity, the successes of WFU are increasingly overlooked within fire management and have become virtually invisible to the public as the context in which WFU is implemented and communicated has changed. The energy and enthusiasm that sustained WFU and caused it to grow through the early 2000s is being lost. The extensive planning necessary to implement and expand WFU effectively is at risk of being replaced by seat-of-pants decision-making that favors aggressive initial attack. For better or worse, fire use as it has been known for the past 25 years has changed. While it is too early to know if the practice of fire use is contracting in the new policy environment, it is not too early to consider

whether it is at risk given its historical sensitivity to whims in policy and politics.

## The Role of Planning, Communication, and Public Education

Fire use today is constrained primarily by two factors: a lack of time and energy devoted to planning for it and by association, a lack of commitment in communicating it clearly and consistently to the fire workforce and the public. New policy guidance has inadvertently caused many fire managers to disregard planning for fire use because any fire can now be managed for any objective in the LRMP. A consequence of not planning is that resource benefit is rarely selected as the initial response and often becomes an objective only after suppression efforts fail or resources are in short supply. It is difficult to communicate the purpose of resource benefit or take credit for managing it under these circumstances. Further, because both the public and large sectors of fire management are still generally unsupportive of fire use, not communicating it clearly and repeatedly virtually assures that they will remain unsupportive.

Ultimately, the selection of ‘good’ fires should occur primarily in the initial decision-making process, informed by current and expected environmental conditions—what WFDSS (Wildfire Decision Support System) calls the preplanned response. This means selecting fire use as the desired alternative before a fire occurs. Today, suppression is the de-facto pre-planned response, and although this has mostly been the case for the past 80 years, it was only ten years ago that fire-use was the pre-planned response in those areas where fire use was an option. The Wildland Fire Use Implementation Plan (WFIP) required managers to opt-out of fire use overtly for an admittedly small fraction of landscapes, but an important fraction nonetheless. Today, justification for a suppression response is not required in any phase of the selection process and the choice of suppression where fire use was warranted is rarely questioned.

In understanding the pre-planned response, it is necessary to recognize that most decision-making in fire management is local and completed in real-time. When a new fire is identified, the important decision of whether to suppress or not is typically made quickly by a few people in a local office, often under duress, and with limited information in front of them. It is only after the most important decision is made and initial attack fails that the WFDSS is invoked to support decision-making, and then as a process usually separate from on-the-ground management. In the absence of the necessary planning, communication, and analysis for successful WFU, conventional suppression is the low-risk choice even if managers intend more complex objectives if the incident escapes. As Uncle Stu noted in his 2007 *Underground, Practical Approach to Planning for and Implementing WFU for Beginners*, “if wildfire use was easy, they would call it suppression.”



Historically, the energy for promoting fire use came from a few individuals committed to it. They pushed to amend fire and land management plans to allow for resource benefit objectives within specified management units and conducted the extensive planning and communication necessary for the events to come. They made pre-season contacts with permittees and landowners describing the intent and purpose of WFU; established formal agreements with neighbors; reviewed closure types annually; conducted pre-season risk analyses; provided constant, clear communication and education with locals and employees about current and future WFU; trained Line Officers down to FFT2s in WFU goals and procedures; developed specific recommendations for the Line Officer; gave daily briefings to firefighters on where and how WFU would be implemented (or not); organized and managed data, modeled fire behavior and risk; and conducted constant risk assessment (Anonymous (Uncle Stu), 2007). The planning was for events that would happen years from now or even after the career of the fire manager was over. Without it, fire use was rarely a viable option.

Today, fire use still requires a dedicated and consistent commitment of time and energy by managers and their line officers. Yet, the day-to-day grind of managing a fire program often supersedes preparation for fire use. As each seemingly longer fire season winds down, managers must implement prescribed fire with a shrinking and often tired workforce followed by use-it or lose-it annual leave and the holidays. The New Year brings hiring in a dysfunctional government hiring environment along with still more training in an increasingly burdensome training regime. Spring brings preparation for the coming fire season, prescribed fire, and fuels treatments. Then another fire season starts the grind all over again. In this environment, without explicit focus and resources dedicated to its application, fire use may not succeed without access to outside help, perhaps coming from specialists whose primary purpose and job description is WFU implementation and planning.

## Looking Back

The pinnacle of WFU was reached in 2006, when nine Wildland Fire Use Teams and at least 30 Fire Use Modules were used to implement this fire management alternative. Fire Use was in the news constantly, often controversial, but being talked about nonetheless by firefighters and the public. Land managers from all federal agencies were writing fire use into plans at an unprecedented rate. WFU team rosters were often full and many young firefighters were lining up to get involved. They sensed opportunities to change fire management, develop exciting careers, work with new technology, and explore new techniques, often with fewer bureaucratic constraints and sometimes fewer training requirements. Fire use modules were purposeful, innovative, and attractive to firefighters, particularly motivated, tech-savvy, ecologically-minded young people. WFU had champions at many administrative levels to convey its purpose and serve as role models for a new cohort of fire managers. Agencies such as

NPS and USFS were integrated around common goals and purposes and they communicated WFU consistently. WFU also connected fire management directly with Fire Science by serving as a training ground for skilled ecologists and fire modelers who were normally either disinclined to participate in fire or not invited. WFU seemed on the cusp of changing business as usual in fire management. Within the WFU community, there was a growing sense that fire use was different from the rest of fire—perhaps perceived as smarter, more-grounded, more innovative, more tech savvy, more efficient, and more frugal than the suppression ranks. WFU represented opportunity and change to young firefighters and provided an environment conducive to development of future leaders.

Leading up to changes in policy guidance in 2009, fire use appeared strong enough to stand on equal footing with fire management at large. But at the same time, there were also concerns that WFU was becoming too distinct from suppression, with divergent training and qualifications threatening to create two fire organizations. In the context of these factors, the policy changes made sense. Yet, six years have passed since the new policy guidance and it is not evident that fire for resource benefit is gaining ground. There is currently one Wildland Fire Management Team nationally that operates more as a type II suppression team than a fire use team. The Wildland Fire Modules are reorganizing, typing, and exploring new technology, but lack high-level leadership and purpose. The roles of the Strategic Operational Planner are not widely understood. Fire Use is no longer in the public eye and its practice is rapidly losing its champions, role models, and leaders. It isn't the policy guidance itself that has caused these changes. It is the associated breakdown of the structures, terminology, and clarity of purpose that has. In retrospect, perhaps fire use still needs a name, its teams, modules, and Fire Use Managers. At a minimum, it needs renewed energy, focus, and commitment.

## Looking Forward

The 2009 Policy Guidance is the most progressive and flexible guidance to fire managers in the history of the US fire policy. New policy isn't necessary to invigorate fire use. Instead, fire management should consider resurrecting elements of the old WFU program, rebuilding a resource base dedicated to its implementation, and communicating its purpose and accomplishments widely. To achieve these outcomes, fire management might consider the following eleven recommendations:

1. Recognize WFU as a practice distinct from other types of fire management and provide a clear name and policy for it. Having more than one type of fire allows flexibility in crafting procedures for individual types of fires, enables clear communication of goals and objectives, and prevents blanket changes from inadvertently affecting one type negatively. Particularly as fire management trends toward emergency management under the umbrella of organizations

such as FEMA, the natural resources will benefit from fire use as distinct from emergency response.

2. Re-establish procedures of the WFIP to encourage formal justification of a suppression response where fire use is approved.
3. Create specialized resources, including leadership positions, whose priority is fire use so that resources are available when the time for fire use is right. More importantly, rebuild a community of fire use practitioners and consider sabbatical-like programs to create opportunities for fire managers to focus on fire use, share their wisdom, and learn from others. Growth, innovation, and leadership in fire use will come from a workforce dedicated to its implementation.
4. Build strong tracking mechanisms and rules to differentiate between types of resource benefit from fire. For example, allowing fires to burn for resource benefit is fundamentally different from accomplishing resource benefit as collateral to suppression, and not suppressing part of a fire has a different meaning if it is accomplished intentionally with resource benefit goals in mind.
5. Champion fire use constantly, intentionally, and publicly. WFU still needs a clear, consistent, long-term communication strategy to gain traction as a common land management tool. Accomplishing resource benefits primarily by accident or under the guise of other management practices will ensure that WFU remains controversial and misunderstood.
6. Identify priority areas where fire for resource benefit is desirable and share them publicly in the form of maps. If fire management officers can't justify specifically where and why the landscape needs fire, it is difficult to imagine them selecting WFU when a fire does occur there.
7. Work to creatively integrate wildfire, WFU, prescribed fire, and mechanical fuel treatments.
8. Link decision support tools such as WFDSS more directly to the pre-planned response. Although it is not practical to use WFDSS substantially after every new start, most of the risk needs to be known before a fire occurs. This argues for a more nimble support system in which fire use is pre-identified and anticipated based on current and future environmental conditions.
9. Integrate fire planning and land management planning to ensure compatibility of land management goals with the realities of managing fire. The hand of fire management continues to be forced by planning decisions that are not informed by fire.
10. Incentivize fire use by creating career opportunities for young firefighters emphasizing education, innovation, and technology.
11. Redouble efforts to produce a holistic, defensible definition of resource benefit, probably relying on better understanding complex ecological concepts such as variability, heterogeneity, resiliency, and recovery. Fire for

resource benefit still suffers from an inability to clearly articulate what its benefits are.

## Conclusions

Fire management's refrain of 'doing the right thing in the right place at the right time' was fully enabled by the changes in policy guidance of 2009. Ironically, those same changes may be discouraging managers from exercising a full range of options. The option of fire use has lost energy and focus and it is not evident that the practice is growing under current policy despite increases in acres claimed. Invariably, at least some resource benefit accrues to every wildfire regardless of management actions. Replacing fire use with these accomplishments would be a negative outcome of fire policy. Invigorating the practice of fire use calls for a look back at the practices and behaviors that led to its successes and perhaps reviving some of them. The importance of the fire use program as a means of developing talented fire use managers should not be overlooked. The Wildland Fire Modules are attempting to resurrect themselves and refocus attention on fire use, and fire managers are still learning how to use new decision support systems effectively. With strong leadership, a vibrant community of practitioners, and active communication with firefighters and the public, there is reason to be optimistic that fire use can flourish and grow.

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